

outsole.

### REMARKS

In response to the Office Action dated May 8, 2002, Applicants respectfully request entry of the above amendments and reconsideration and allowance of the claims.

Applicants would first like to thank the Examiner for the courtesies extended during an interview conducted between the Examiner and Applicant's representative David Leason.

The Specification has been amended in accordance with the Examiner's observations and in view of this Amendment, the objection should be withdrawn.

### Section 112 Rejections

Claims 1-13 and 15-17 stand rejected under 35 U.S.C. 112, second paragraph, for the reasons set forth in paragraph 4 of the Office Action.

The Examiner has objected to the user of the term "lower" in the claims. Applicants respectfully submit that this is a term that is used within the relevant technical field and further, the lower is sufficiently described in the specification for one to understand the general structure that Applicants are referring to. Beginning on page 8 of the specification, the lower is described as including a base material 32 (typically a multi-layer structure with cushioning

elements 35) for engaging the wearer's foot. Underneath the cushioning element 35, a support layer 36 is provided. These components are also clearly illustrated in the drawing figures. One of skill will appreciate that the lower can also be thought of as the insole portion of the shoe. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of this ground of rejection since the term "lower" is sufficiently defined in the specification.

The rejection of claims 12, 13, and 17 is now moot in view of the present amendment.

#### Section 102(b) and 103 Rejections

Claims 1-6, 8-17 and 27-38 stand rejected under 35 U.S.C. 102(b) as being anticipated by Walters, U.S. Patent No. 384,483. Claim 7 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Walters in view of Mitchell, U.S. Patent No. 1,716,790.

Walters discloses a shoe construction in which replaceable cloth strips are cemented directly to the inner sole *a* or into cavities *b2* and *b3* formed in the outersole.

Walters does not, however, disclose or suggest a construction in which an integral assembly of a fabric and a backing layer is disposed on a non-ground contacting portion of an outsole as recited in the claims now pending. The fabric strip in the Walters' shoe is not a part of an integral assembly with a

"thermoplastic backing layer" (plus a fabric to provide the ground contacting surface) which is then joined to a base section of the non-ground contacting portion of the first section, which also has a ground-contacting portion.

The construction of independent claim 3 calls for a layered outsole which, within the second section, comprises an outer ground contacting fabric layer integrally joined to a backing layer (thermoplastic material) which is in turn attached to a section of the non-ground contacting portion of the first section. More specifically, the backing layer is bonded to a base section of the non-ground contacting portion of the first section by a fused bond at a boundary zone between the backing layer and the base section such that the fabric material is a ground contacting surface. The fused bond can be a result of a manufacturing process in which the material of the first section (e.g., a rubber or plastic or thermoplastic materials recited in claims 8 and 9) is flowed around the backing layer of the second section and the backing layer fuse bonds to the flowed material.

Applicants respectfully contend that this amendment is fully supported by the specification and no new matter has been introduced.

At page 15, lines 8-10, it is described that the thermoplastic material that forms the backing layer is injected into a mold after it has been melted to a softened state. Because the thermoplastic material is in a softened state, it is able to flow throughout the mold cavity (page 15, lines 11-13). At page 17, lines 4-6, it is further described that the material that forms the first section of the outsole

(e.g., a thermoplastic material) is injected into a mold so that it flows throughout the mold. Based on the foregoing passages, it is readily understood that the injected material is in a softened, heated state. As explained on page 17, lines 6-7, the backing layer is in a softened state when it can bond with the thermoplastic material that is injected to form the first section. Applicants respectfully submit that one of skill in the art would clearly appreciate that a bonding action between two softened, heated materials is a fused bond between a boundary zone of these materials.

Applicants attach hereto, as Exhibit A, page 34 of Concise Encyclopedia of Polymer Science and Engineering, (John Wiley & Sons, 1990), which describes the types of plastic bonds. According to this article, there are four ways to create plastic bonds with the fourth one being by fusion or melting techniques. Thus, one of skill in the art understands that a fusion bond results when two melt-compatible materials are melted and then brought together to form a fusion bond once the materials cool to a point below the melting points of the materials.

Accordingly, no new material is introduced by the present amendment since Applicants set forth in the specification that the backing layer and the material forming the first section bond together as a result of both materials being heated to point where they exist in softened (heated) states.

Walters clearly does not teach or suggest any type of bonding

between the strip of cloth and another component that can be characterized as a fused bond formed between a thermoplastic material and the material forming the first section. The fused bond recited in claim 3 is a structural limitation not found in Walters. Support for this position that this feature is to be properly read as a positive structural limitation is set forth in the holding of *In re Garnero*, 56 CCPA 1289, 162 USPQ 221 (1969), which is attached hereto as Exhibit B (see page 3 thereof). Thus, this claimed feature is clearly lacking in the Walters reference.

For at least the foregoing reasons, the Walters reference is lacking at least several features and therefore, the rejection under 35 U.S.C. 102 of the independent claim 3 should be withdrawn.

Claims 2 and 4-12 should be allowed as depending from what should now be an allowed independent claim 3, as amended.

Claim 15 is an independent claim reciting a shoe outsole having a first section that includes a ground contacting portion and a non-ground contacting portion. The outsole includes a second section having a outer ground contacting layer formed of a fabric materia and a backing layer formed of a thermoplastic material that is connected to the fabric material to define an integral insert. As previously mentioned, Applicants respectfully submit that the Walters reference fails to disclose or suggest the use of an insert having the claimed construction.

Further, claim 15 recites that the non-ground contacting portion of the first section includes at least one recessed section for receiving the insert where

the backing layer is bonded to a base of the recessed section by a fused bond at a boundary zone between the backing layer and the base so that the fabric material is a ground contacting surface. As explained in the discussion of claim 3, Walters clearly does not disclose or suggest a fused bond between a thermoplastic backing layer of an insert and material forming the other portions of the outsole. Instead, Walters discloses cementing the strips within recesses to either the insole (which does not have a ground contacting component) or to the outsole itself.

Based on the foregoing reasons, the rejection of claim 15 should be withdrawn and this claim should be passed to issue.

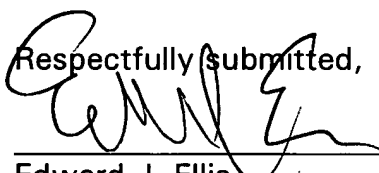
Claims 16, 17 and 33-36 should be allowed as depending from what should now be an allowed independent claim 15.

Claims 39-42 have been added by way of this amendment. Consideration and allowance of these claims are respectfully requested. Independent claim 39 is similar to the other independent claims as it recites the type of attachment between the backing layer and the first material in that the claim recites that these two components are moldably attached in a softened state to form a unitary outsole construction with the fabric material defining a ground contacting surface. This type of construction is neither disclosed nor suggested by Walters which instead speaks of cementing fabric strips to another member.

Applicants further contend that this feature of claim 39 is to be properly interpreted as being a structural limitation rather than a process limitation

in accordance with the holding in the previously mentioned *In re Garner* case (see page 3, Exhibit B).

It is believed that this amendment is fully responsive to the outstanding Office Action. Should the Examiner believe that direct contact with Applicants' attorney would advance prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

Respectfully submitted,  
  
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5

**MARKED UP COPY OF THE SPECIFICATION AND  
CLAIMS 2-12, 15, 16, 17, and 33-36**

**IN THE SPECIFICATION**

Page 9, please replace the paragraph beginning with "In accordance" with the following paragraph:

In accordance with the present invention, the outsole 40 is made of a rigid material so as to provide support to the outsole 40 and includes an outer surface 42. The outsole 40 may have any number of shapes depending upon the type of shoe 10. For example, shoe 10 is a typical women's shoe and therefore includes a prominent heel 50. When shoe 10 has a heel, such as heel 50, the heel 50 may be formed as a separate member from the outsole 40 or the heel 50 may be integrally formed as part of the outsole 40. In the exemplary shoe 10, the heel 50 is a separate member which is coupled to the [backing layer 42] outsole 40 using known techniques. Preferably, an upper portion of the heel 50, in the form of a lip 51, extends around a heel portion of the exterior cover 24. This lip portion 51 is coupled to the adjacent heel portion of the exterior cover 24 using an adhesive or the like. A bottommost portion 53 of the heel 50 engages the ground or support surface and therefore may be formed of a suitable material for such wear. For example, the bottommost portion 53 may be formed of the same material as the other portions of the heel 50 or may be formed of a different material. The major

6



portion of the heel 50 is preferably formed of a rigid material, such as a rigid plastic or wood. The bottommost portion 53 may be formed of this type of material or may be in the form of a shaped rubber pad which is coupled to the other portions of the heel 50, as shown in Figs. 1-2.

Page 10, please replace the paragraph beginning with "In accordance" with the following paragraph:

In accordance with the present invention, the outsole 40 also includes a shaped fabric member 60 which forms a part of the outsole 40 and has a predetermined shape. As best shown in Fig. 3, the shaped fabric member 60 includes a thin, flexible, fabric sheet material 62 and a [fabric] backing layer 64. Preferably, the fabric sheet material 62 is formed of a non-woven fabric, such as polyester fibers mixed with cotton. Thus, the fabric sheet material 62 is not produced using a weaving process but rather is produced using other suitable techniques for forming a non-woven fabric. For example, the polyester fibers may be used to form a needle felt which is then impregnated with a material before being dried and pressed. It will be appreciated that the shaped fabric member 60 may have any number of shapes and sizes depending upon the shoe design and other parameters such as the amount of contact between the outsole 40 and the ground or support surface.

Page 11, please replace the paragraph beginning with "In the shoe" with the following paragraph:

In the shoe 10, the shaped fabric member 60 is disposed within the outsole 40 and more preferably is disposed within the ball portion 49 of the outsole 40. Preferably, the shaped fabric member 60 is integrally formed as part of the outsole 40 as will be described hereinafter. The bottommost portion 53 of the heel 50 is formed of a rubber or other suitable material. A gap 63 is formed between the fabric sheet material 62 and a surrounding edge 71 of the [backing layer] outer surface 42 of the outsole 40. As shown in the figures, the outer surface 42 of the outsole 40 surrounds the shaped fabric member 60. When the shaped fabric member 60 is disposed within the outsole 40, an outer face of the fabric sheet material 62 is preferably substantially planar to the surrounding outer surface 42 of the outsole 40 so that during use, the outsole 40 engages the ground in a relatively uniform manner.

Page 12, please replace the paragraph beginning with "The fabric" with the following paragraph:

The [fabric] backing layer 64 is preferably formed of a shape-retaining material, for example, a rubber or plastic material. The [fabric] backing layer 64 and the fabric sheet material 62 are integrally connected to one another by any number of

techniques, including using a molding process as will be described in greater detail hereinafter. In addition, the surrounding outsole 40 and the [fabric] backing layer 64 may be formed of the same material or may be formed of different materials. In one exemplary embodiment, both are formed of a thermoplastic. In another embodiment, both are formed of a material that is referred to herein as a thermoplastic rubber.

Page 12, please replace the paragraph beginning with "The shaped fabric member" with the following paragraph:

The shaped fabric member 60 along with the surrounding outsole 40 provide the shoe 10 with a slip-resistance, shape-retaining partially fabric outsole 40. It is also contemplated that the [backing layer] outer surface 42 and/or the [fabric] backing layer 64 may have a tread pattern formed thereon for a decorative purpose, a functional purpose, or both. For example, the surface 42 and the layer 64 can have a tread pattern, and in the case of the [fabric] backing layer 64, the fabric sheet material 62 can closely conform to the pattern, e.g., follow the contour thereof.

Page 14, please replace the paragraph beginning with "The first and second" with the following paragraph:

The first and second dies 102, 104 are heated to a predetermined temperature which permits the molding process to proceed without damaging or

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destroying the fabric sheet material 62. The predetermined temperature which is required for the molding process will depend upon a number of factors, including the type of thermoplastic resin used in the molding process. In one exemplary embodiment, the first and second dies 102, 104 are heated to a temperature of about 120° C when a thermoplastic rubber is used to form the [fabric] backing layer 64. The first and second dies 102, 104 are pressed together with the fabric sheet material 62 being held in place against the first die 102 and then the thermoplastic rubber is injected into the first mold 100 after the thermoplastic rubber has been melted to a softened state by being exposed to a sufficient temperature (120° C).

Page 15, please replace the paragraph beginning with "Because the thermoplastic" with the following paragraph:

Because the thermoplastic rubber is in a softened state, it is able to flow throughout a cavity formed by the first and second dies 102, 104. The thermoplastic rubber forms the shape of the [fabric] backing layer 64 once the thermoplastic rubber cools after a predetermined time period in which the temperature of the first mold 100 is reduced. The result is that the shaped fabric member 60 is formed and the thermoplastic rubber and the fabric sheet material 62 are bonded to one another by the heating process of the molding operation. Once the shaped fabric member 60 has sufficiently cooled down, the first and second dies 102, 104 are opened and the shaped fabric member 60 is removed therefrom. Excess fabric sheet material 62 is

cut off from the shaped fabric member 60 to provide for the shaped fabric member 60 shown in Fig. 11. As previously discussed, the shaped fabric member 60 includes the fabric sheet material 62 bonded to the [fabric] backing layer 64.

Page 16, please replace the paragraph beginning with "In a second" with the following paragraph:

In a second molding operation, the shaped fabric member 60 is placed into a second mold 200, shown in Fig. 12. The second mold 200 includes a first die 202 and a second die 204. The first and second dies 202, 204 define a cavity which is generally in the shape of the outsole 40. It will be appreciated that the cavity may not necessarily define the entire heel structure 50 of the outsole 40 but will likely define the remaining portions, e.g., the shank 53 and the ball portion 49. The shaped fabric member 60 (Fig. 11) is inserted into the first mold 202 with the fabric sheet material 62 facing a bottom section 203 of the first die 202. Consequently, the [fabric] backing layer 64 faces the second [mold] die 204 when the second die 204 is <sup>same</sup> closed.

Page 16, please replace the paragraph beginning with "The first and second" with the following paragraph:

The first and second dies 202, 204 are heated to a predetermined

temperature and are closed with respect to one another. Once again, the predetermined temperature is a temperature at which the first and second dies 202, 204 will not damage the fabric sheet material 62 but will permit (1) the thermoplastic rubber forming the [fabric] backing layer 64 to resoften and (2) permit a second thermoplastic rubber material to soften sufficiently so that it may be injected into the second mold 200. Preferably, the predetermined temperature of the second mold 200 is greater than the predetermined temperature of the first mold 100. In one exemplary embodiment, the predetermined temperature of the second mold 200 is from about 160° C to about 170° C. It will be appreciated that suitable molding temperatures will vary depending upon a number of parameters, such as the operating conditions and the type of thermoplastic rubber being used.

Page 17, please replace the paragraph beginning with "The second" with the following paragraph:

The second thermoplastic rubber material is injected into the second mold 200 so that it flows within the cavity formed by the first and second dies 202, 204. Because the [fabric] backing layer 64 is softened, the heated, injected second thermoplastic rubber material may bond with the [fabric] backing layer 64.

In one embodiment, the thermoplastic rubber material used in both the first and second molds 100, 200 is the same material. It will be appreciated that the thermoplastic rubber material used in the first and second molds 100, 200 may be

different materials. After heating the materials in the second mold 200 for a sufficient time period, the molds 202, 204 are cooled causing the resultant outsole 40 to cool. After a sufficient cooling period, e.g., several minutes (i.e. 6 or more minutes), the first and second molds 202, 204 are opened and the outsole 40 is removed.

Page 17, please replace the paragraph beginning with "The outsole" with the following paragraph:

The outsole 40 preferably has the shaped fabric member 60 integrally formed as a part thereof due to the bonding between the [fabric] backing layer 64 and the surrounding outsole 40. Preferably, the second mold 200 is configured so that the fabric sheet material 62 is not in contact with the second thermoplastic rubber that is injected into the second mold 200. In the shoe 10, the gap 63 separates the fabric sheet material 62 from the surrounding outer surface 42 of the outsole 40. In other words, the outsole 40 is formed around the shaped fabric member 60 so that the ground contacting surface of the outsole 40 is formed of the fabric sheet material 62 and a portion of the outer surface 42 with both components being preferably generally planar with one another and exposed to contact the ground.

Page 21, please replace the paragraph beginning with "As best" with the following paragraph:

As best shown in Fig. 7, the shaped fabric member 340 is formed of a fabric sheet material 343 and a fabric backing layer 345. As will be described hereinafter, the [fabric] backing layer 345 is preferably integrally bonded to the material forming the outsole 330 and preferably, the layer 345 and the outsole 330 are formed of the same material so that it will appear to the wearer that the fabric sheet material 343 is simply attached to a particular section of the outsole 330. The [fabric] backing layer 345 is the material lying immediately underneath the fabric sheet material 343 and serves to define a platform extending downwardly from the surrounding sections of the outsole 330. In this manner, the fabric sheet material 343 is only in contact with the [fabric] backing layer 345 and not the surrounding sections of the outsole 330.

Page 22, please replace the paragraph beginning with "The manufacture" with the following paragraph:

The manufacture of the shoe 300 is preferably done in a similar or the same manner as the manufacture of the shoe 10 described in reference to Figs. 10-12. More specifically, the manufacture is preferably a two stage molding process using the first and second molds 100, 200. In this embodiment, the bonding between the [fabric] backing layer 345 and the outsole 330 is clearly shown in the cross-sectional view of Fig. 7. After forming the shaped fabric member 340 using the first mold 100, the member 340 is then placed in the second mold 200 to form the outsole



330 illustrated in Figs. 5-7. During the second molding process, the fabric sheet material 342 is not in contact with the second thermoplastic rubber that is added to the second mold 200 to form the remaining sections of the outsole 330 but rather the second thermoplastic rubber is disposed over and around the heated fabric backing layer 344 (preferably a thermoplastic rubber also).

#### IN THE CLAIMS

2. (Twice Amended) The shoe of claim 3 [1], wherein the fabric material comprises a ground contacting surface and is free of contact with the first section.

3. (Amended) A shoe comprising:  
an upper;  
a lower attached to the upper; and  
an outsole attached to the lower, the outsole having a first section  
formed of a first material and including a ground contacting portion and a non-  
ground contacting portion and having a second section including an outer ground  
contacting layer formed of a fabric material,

[The shoe of claim 1,] wherein the second section further includes a backing layer formed of a [second] thermoplastic material, the fabric material of the

outer ground contacting layer being connected to the backing layer to define an integral assembly and wherein [only the backing layer of the integral assembly contacts the first material] the backing layer is bonded to a base section of the non-ground contacting portion of the first section by a fused bond at a boundary zone between the backing layer and the base section such that the fabric material is a ground contacting surface.

6. (Amended) The shoe of claim 3 [1], wherein there is a gap between the fabric and the first material.

7. (Amended) The shoe of claim 3 [1], wherein the fabric material is a non-woven fabric material.

8. (Amended) The shoe of claim [1] 3, wherein the first material is selected from the group consisting of rubber materials and plastic materials.

9. (Amended) The shoe of claim [1] 3, wherein the first material is a shape-retaining moldable thermoplastic material.

10. (Amended) The shoe of claim [1] 3, wherein a bottommost section of the fabric material and a bottommost section of first section

are planar with respect to one another.

11. (Amended) The shoe of claim [1] 3, wherein the fabric material bulges outwardly from surrounding portions of the first section of the outsole so that the fabric material extends beyond a plane containing the ground contacting surface of said surrounding portions.

12. (Amended) The shoe of claim [1] 3, wherein the second section occupies a portion of the ground contacting surface which is greater than the first section [sufficient to permit classification under subheading 6405.20.90 of the Harmonized Tariff Schedule of the United States].

15. (Amended) A shoe outsole comprising:  
a first section including a ground contacting portion and a non-ground contacting portion; and  
a second section including an outer ground contacting layer formed of a fabric material [The outsole of claim 14], wherein the [first] second section includes a backing layer formed of a [non-fabric] thermoplastic material and being connected to the fabric material to define an integral [assembly] insert, wherein the [fabric material is free of contact with the section] the non-ground contacting portion of the first section includes at least one recessed section for receiving the

insert, the backing layer being bonded to a base of the recessed section by a fused bond at a boundary zone between the backing layer and the base so that the fabric material is a ground contacting surface.

16. (Amended) The outsole of claim 15, wherein the backing layer and the [second] first section comprise a material selected from the group consisting of rubber materials and plastic materials.

17. (Amended) The outsole of claim 15, wherein the [first] second section [permits classification under the Harmonized Tariff Schedule at a tariff rate lower than a shoe having a ground contacting surface that is free of the first section] occupies a portion of the ground contact surface which is greater than the first section.

33. (Amended) The shoe outsole of claim [29] 15, wherein the [second section] non-ground contacting portion is moldably attached to the backing layer.

34. (Amended) The shoe outsole of claim [28] 15, wherein the non-ground contacting portion of the [second] first section completely surrounds the fabric material.

35. (Amended) The shoe outsole of claim [28] 15, wherein there is a gap between a perimeter edge of the fabric material and the non-ground contacting portion of the first [second] section.

36. (Amended) The shoe outsole of claim [28] 15, wherein the [ground contacting portion] fabric material occupies more than 50% of a ground contacting surface of the outsole.

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